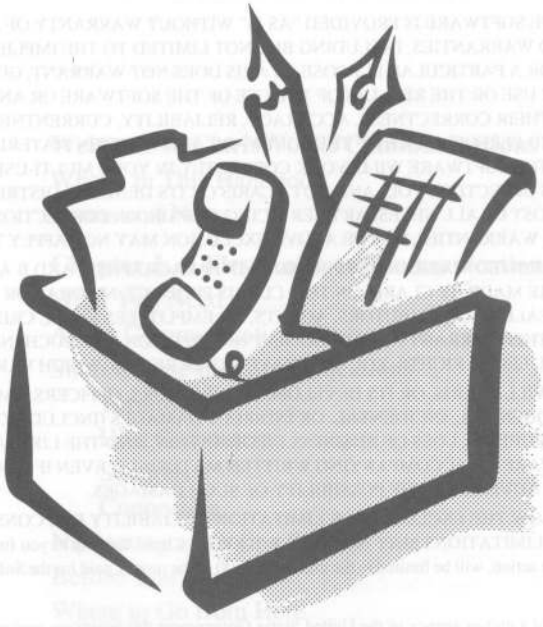
CLARIS™

ClarisWorks™

Communications Handbook



ClarisWorks

Communications Handbook

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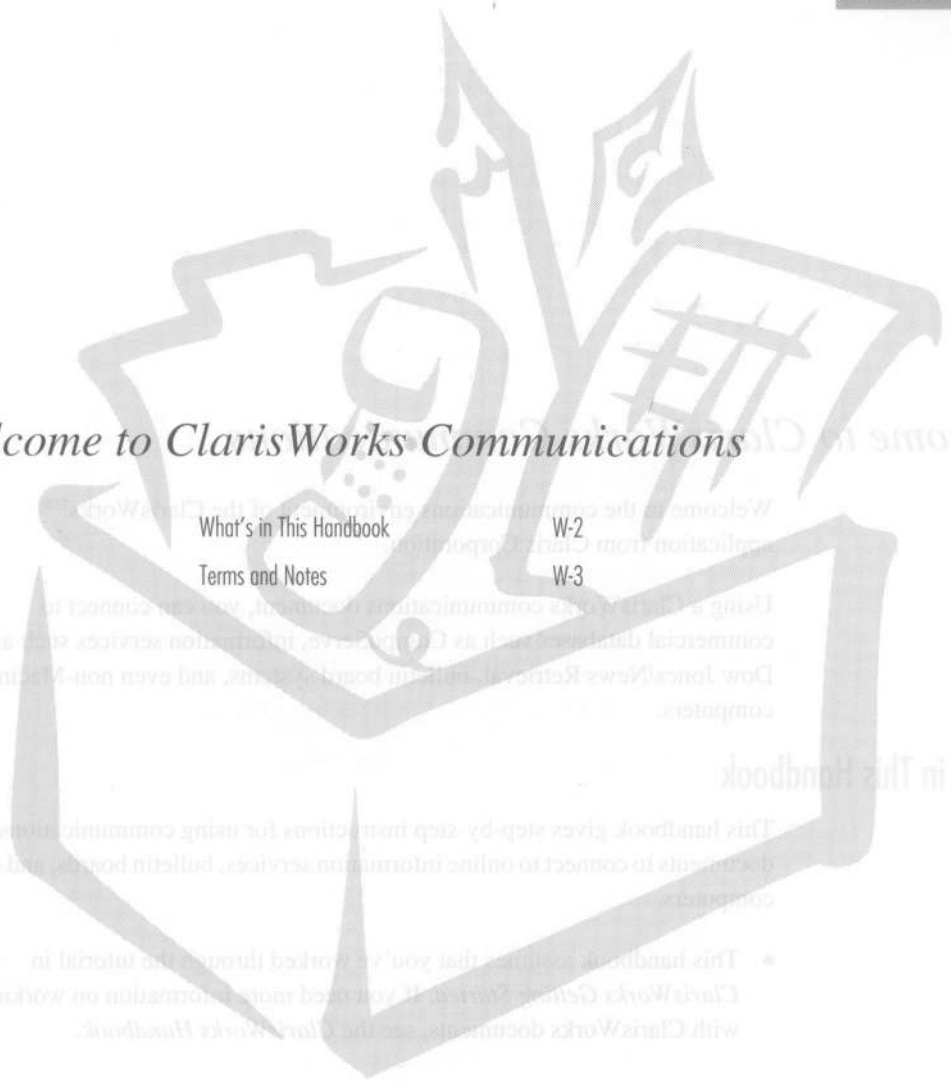

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Welcome to ClarisWorks Communications

Welcome to the communications environment of the ClarisWorks™ application from Claris Corporation.

Using a ClarisWorks communications document, you can connect to commercial databases such as CompuServe, information services such as Dow Jones/News Retrieval, bulletin board systems, and even non-Macintosh computers.

What's in This Handbook

This handbook gives step-by-step instructions for using communications documents to connect to online information services, bulletin boards, and other computers.

- This handbook assumes that you've worked through the tutorial in *ClarisWorks Getting Started*. If you need more information on working with ClarisWorks documents, see the *ClarisWorks Handbook*.

Terms and Notes

Terms that appear in **boldface** appear in the Glossary. Notes preceded by a diamond (◆) contain important information you may need to work with communications documents.

Chapter 1

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Chapter 1

A First Look at Communications

This chapter gives a brief introduction to communications and to ClarisWorks communications documents.

If this is your first experience with computer communications, you may be surprised at how quickly and easily you can connect to an online information service or another computer.

What You Need

Before you connect, you need the following equipment and software:

- An Apple Macintosh II, SE, Portable, Classic, or Plus computer with at least 1 megabyte of memory. Claris recommends (and system 7 requires) 2 megabytes.
- The Apple/ClarisWorks communications toolbox. For installation instructions, see *ClarisWorks Getting Started.*
- Macintosh system software version 6.0.5 or later. You can use ClarisWorks with system 7 software.
- A hard disk drive. You can't use the communications tools with two 800K 3.5-inch disk drives.
- A modem and appropriate cables. A modem is not required for direct connections or for communication via a network.

If you plan to connect to a commercial information service, you'll also need to register for an account. You can sign up for most popular services on your first connection.

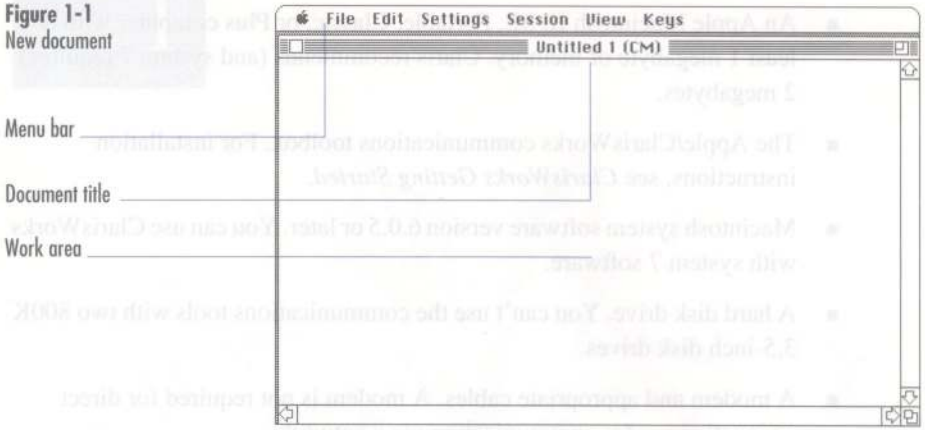
- **To Connect Now** If you simply want to connect, without reading further, skip directly to chapter 2, "Using Communications Documents."

About Communications Documents

A ClarisWorks communications document is set up so that you can usually make connection by adjusting just a few ClarisWorks options, described in chapter 2.

A new document is shown in figure 1-1. The letters *CM* in the title bar indicate that this is a communications document.

Figure 1-1
New document



When you're connected to an online service or another computer, incoming data scrolls onto the work area. Portions of the incoming data are temporarily stored in the log window, as explained later, in chapter 2. You can open the log window or leave it closed as you work.

While connected, you can see the commands you type in the work area, as well as prompts and any incoming data from a service.

Short Course on Communications

If you're new to communications, you may find it helpful to review some of the vocabulary used in the field. Though many of the terms may seem overly technical, the concepts involved are easy to grasp.

Terminals

A ClarisWorks communications document turns your Macintosh into a terminal: a system of hardware and software you use to send and receive information. Your computer and the computer to which you're sending information must "speak the same language."

You control the "language" on your end by setting up ClarisWorks and your Macintosh to imitate (emulate) the setup of the distant computer. This process is called **terminal emulation.**

Host Computers

Online information services use software that is especially designed to handle many users and large amounts of information. The computer used by the service is referred to as a remote computer, or the **host computer.**

To communicate with a host computer, you usually need an assigned user name and password. When you identify yourself at connection, you're **logging on.** When you disconnect, you're **logging off.**

Sessions

Each time you send or receive information, you begin and end a communications **session.** For brevity, the communications document you use to connect is sometimes referred to as a **session document.**

The time that passes while you're connected to an online service or bulletin board is called **connect time.** You're usually billed only for connect time when you use the services of a commercial host computer.

Connecting

Communication from one computer to another requires a transmission channel, usually a telephone line but sometimes a network or direct cabling between two computers. Connection by telephone requires a modem, a device that turns data from your computer into information that can be transmitted over the telephone line. The computer at the other end of a telephone connection also requires a modem. Information passes through that modem to the distant computer.

Navigating an Online Service

Your online service will have many specialized terms and commands you'll need to recognize when you're connected. For example, you may be required to enter your user name and identification number a certain way.

After you're connected to a service, you'll need to know how to use the service's commands to find the information you want. Most online services present a numbered menu. You type the number of the item you want, press Return, and either move to a lower-level menu or start receiving the information.

At each menu level, you can usually type a help command that gives information about the part of the service you're using.

Be sure to review the manual sent to you by the service. Keep the manual nearby as you explore the online service for the first time.

Before You Connect

To save time and avoid frustrating searches for the right account or ID number, collect all the information you need before you connect. Once connected, you'll want to proceed as quickly as possible.

- Make sure your modem is plugged in and connected to the proper port on the Macintosh. See the documentation for your modem.
- Open the online service manual to connection guidelines.
- Write all identification numbers on a card, or get out the card that was sent to you by the service.
- Keep the manual and card near your Macintosh.

Where to Go from Here

With the background provided here, you can now proceed to set up a document for connection. For information, see chapter 2, "Using Communications Documents."

Chapter 2

Using Communications Documents

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Chapter 2

Using Communications Documents

This chapter gives step-by-step instructions for connecting to an online service, connecting to another computer, receiving data, and managing and saving incoming data.

The communications handbook assumes that you've worked through the tutorial in *ClarisWorks Getting Started* and that you're familiar with basic ClarisWorks and Macintosh concepts. If you need information about creating or working with documents, see the *ClarisWorks Handbook*.

Connecting to an Online Service

This section gives step-by-step instructions for connecting and disconnecting. To learn how to save or capture the data you receive, see "Capturing Incoming Data," later in this chapter.

Creating a New Session Document

To connect to an online service, you start with a communications document. You use ClarisWorks commands to make the connection and then browse through the service or bulletin board menus to find specific information.

To create a session document

- **Start ClarisWorks and double-click the Communications button in the New Document dialog box.**

  The new document opens, with the initials *CM* in the title to indicate a communications document. As you work, the title bar changes to show session status.

- **Note** You can open only one communications document at a time.

Setting Up to Dial

When you connect, you need to provide the telephone number you want to use.

To enter the telephone number

1. **Choose Connection from the Settings menu.**

   You see the Connection Settings dialog box (figure 2-1). If you try to connect without entering a phone number, ClarisWorks asks for the number when you open a connection.

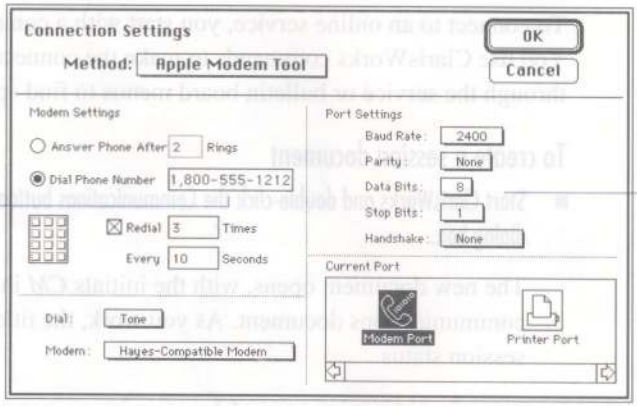


Figure 2-1
Entering the telephone number

2. **Type the telephone number of the online service or computer you plan to call.**

   Use a comma to insert a pause after a telephone access number, such as 8 (wait for a dial tone) and 9 (wait for an outside line). You can use hyphens for readability if you wish:

   18005551212 *or* 9,8005551212 *or*
   1-800-555-1212

   For most modems, each comma adds a 2-second delay. If you need a longer delay, you can add more commas.

   Theoretically, you can type as many numbers as you like in the number box, but most modems won't accept more than 32 characters. Some long-distance services and hotel phone systems may require more characters. Call technical support if you run into this limit.

3. Choose another baud rate from the pop-up menu if your modem doesn't use the preset baud rate (2400) or if you want to use a different baud rate.
4. Choose the name of your modem from the Modem pop-up menu.

   If your modem isn't listed, use the preset choice, Hayes-Compatible.

5. Unless your online service requires further changes, leave all other options as is and click OK.

   ClarisWorks returns you to the session document.

- **Stationery** You can set up ClarisWorks stationery so that you don't have to reenter the online service telephone number each time you connect. See "Saving a Document "and "Using Stationery Documents," later in this chapter.

Connecting

With your account information handy and the session document open on the screen, you're now ready to connect.

To connect to an online service

1. Switch on the modem.

   The modem will probably sound a tone or flash a light to inform you that it's on.

2. Choose Open Connection from the Session menu.

   If you see a message that says, "Initializing Modem," do nothing. (If you wish, you can cancel dialing while this message is on the screen.)

   You may hear telephone tones from the modem, and the lights on the modem will probably blink intermittently.

3. When the online service answers (a dialog box that signals connection appears briefly), press Return and then respond to the requests given.

   The service asks for identification, usually your user name, account number, and password. If you're connecting through a public network like Telenet or TYMNET, you will be asked for the name of the service you want.

4. **Press Return after each response you type.**

   You may be asked to retype a portion of your identification (user name or number, for example). Such requests usually mean that you made a typing error. Or, you may need to enter the information in a certain required format. (See your online service instructions.)

   You may have typed a space in the wrong place or used lowercase letters when only uppercase letters work. Or, you may have pressed Return once when you should have pressed it twice. You may have trouble if Caps Lock is on. Keep trying. If you continue to have problems, call the customer service line at the online service.

   When the service displays a welcome message and main menu, you're fully connected and ready to use the service.

5. **Use the online service's commands to find the information you want.**

   Incoming data scrolls quickly onto and off the top of the screen. ClarisWorks temporarily stores the data in a portion of the document called the **log window.** See "Opening the Log Window," later in this chapter.

Disconnecting

To disconnect, you first log off the online service and then instruct ClarisWorks to close the connection.

To disconnect

1. **Use the service's command to log off.**

   Disconnection commands vary. One of the following will probably work:

   ```
   off, bye, quit, exit, logoff, logout
   ```

   You may also need to use a special character—a slash (/), for example—before the log-off command. The service indicates the disconnection on the screen. On most services, you can immediately log back on if you wish, using the current ClarisWorks session document.

- **Important** After you log off, make sure the disconnect message is real. Most modems have a connect light that glows steadily while you're online. To make sure you're disconnected, check to see that the connect light is off.

Saving a Document

You can save the contents of a communications document with a few easy steps.

The log window is preset to temporarily store about two screens of data (48 lines per screen). When you save a document, you save the contents of the log window plus the contents of the screen. You can increase the number of lines you store in the log window. For information, see "Setting Preferences," later in this chapter.

To save data

1. **When you're ready to save the document, choose Save As from the File menu (you can do this while you're still connected).**

   You see the Save As dialog box (figure 2-2). You can switch folders if you wish.

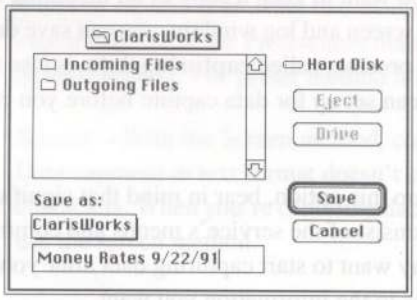


Figure 2-2
Using the Save As dialog box to name a document

2. **Type a name, choose an option from the Save As pop-up menu, and Click Save.**

   When you save a document under a new name, the open document window title is renamed and a copy is saved under the new name. Save As options are described in the following paragraphs.

ClarisWorks —This option saves the document, and all current settings, as a new communications document with a new name.

ClarisWorks Stationery —This option saves the current document as a ClarisWorks stationery document. You can reopen the stationery document later and use it without having to redo any of its settings. If you connect to multiple services or computers, you can create a stationery document for each connection. For more information, see "Using a Stationery Document," later in this chapter.

If you've set up a document you plan to use often, name it "ClarisWorks CM Options" and save it in the Claris folder. Whenever you create a new communications document, the ClarisWorks CM Options document will open automatically.

Text —The session document, and any data in the log window, is saved as a text document. You can reopen it in the word processing environment. Text is saved in nonbinary format. For information on formats, see "Capturing Data," which follows.

Capturing Data

If you know you want to keep a copy of all incoming data, and not just the contents of the screen and log window, you can save data into a text file as you receive it. This process, called **capturing data,** is also useful if you're short on memory. You can set up for data capture before you connect or while you're online.

When you set up this option, bear in mind that significant portions of some sessions will consist of the service's menus and command options. For this reason, you may want to start capturing data after you've worked through the service's menus to the information you want.

To capture incoming data

1. Choose Capture Data from the Session menu.

   You see the Capture Data dialog box (figure 2-3).

2. Type a name for the captured data and click Save.

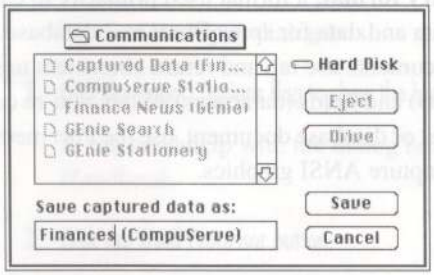


Figure 2-3
Naming a file for captured data

All incoming data is saved in this file.

To stop data capture

- Choose Stop Data Capture from the Session menu.

To reopen a file containing captured data

- See "Opening Saved Documents," later in this chapter.

More about data capture

You can capture data using two methods, Screen and Port. Methods of data capture are set in the Preferences dialog box (see "Setting Preferences," later in this chapter). The preset method is Screen.

Screen —With the Screen method, captured data is captured in **text format.** Data captured in text format doesn't contain tab, linefeed, or formfeed characters. When you're capturing data for use in a word processing document, use the screen method.

Port —With the Port method, incoming data is received exactly as sent, complete with tab, linefeed, and formfeed characters. This method captures data in **binary format,** a format used primarily to capture certain types of technical data and data for spreadsheet and database files. Spreadsheet and database documents use tab and return characters to separate data into cells (spreadsheets) and fields (databases). When you're capturing data destined for a spreadsheet or database document, use the Port method. You can also use this method to capture ANSI graphics.

Receiving a Call

You can set up a session document to wait for another computer to connect with your Macintosh.

To set up the number of rings

1. Open a new communications document and choose Connection from the Settings menu.

   You see the Connection Settings dialog box (figure 2-1, earlier in this chapter).

2. In the "Answer Phone After *x* Rings" box, type the number of rings you want to occur before the modem responds to a connection request.

3. Click OK.

To receive a connection request

- Choose Wait for Connection from the Session menu.

  You may see a message saying that the modem is being initialized and, following that, another message that says the modem is waiting for a connection request.

  When a connection request comes in, the modem answers the call and ClarisWorks opens the connection.

Opening Saved Documents

After you've saved a document as text or captured data, you can open the saved document in the ClarisWorks word processing environment and work with it there. Or, you can select the text, copy it, and paste it into a text document.

To reopen a saved or captured text document

1. Within ClarisWorks, choose Open from the File menu.

   You see the Open dialog box.

2. Click the Import Options flag to show the buttons for different ClarisWorks document types.

   If you need help with the dialog box, see chapter 2 of the *ClarisWorks Handbook*.

3. Click the Word Processor button.

   The saved or captured document appears in the list of available documents. You may need to switch folders to find the document name.

4. Select the document name and click Open (or double-click the name).

   ClarisWorks opens the document. You can now edit the text the same way you edit any other ClarisWorks text document.

If you open a captured document, ClarisWorks converts the data into text in the new document and adds the word *Converted* to the title. You can change the name when you save the document.

Working with Data During a Session

While a communications session is in progress, incoming data is displayed on the screen, and portions of data are temporarily stored in the log window. A new ClarisWorks communications document is preset to store approximately two screens of data. For information on changing the number of lines stored, see "Setting Preferences," later in this chapter.

Cancelling Automatic Save

As incoming data fills and then overflows the screen, the data is temporarily stored in the log window, whether or not the log window is visible. Lines of data that go into the log window are referred to as **lines off top** (the data scrolls off the top of the screen).

If you get a low memory message, or if you simply want to scan and discard the data you receive, you can switch off the lines off top feature.

To cancel automatic save

- Choose Save Lines Off Top from the Session menu.

The preset check mark disappears. Incoming data won't be stored until you restore the check mark by again choosing the command.

Saving Screen by Screen

Saving all the lines off top may take more memory than you have available. You can still save portions of data that you find to be particularly interesting or useful by taking a snapshot of a screen. Also, under certain conditions, incoming data isn't stored in the log window, but appears in the main document window instead. Saving screen by screen is one way to keep the data you want. For more information see "Setting Preferences" later in this chapter.

To save screen contents

- Choose Save Current Screen from the Session menu.

ClarisWorks temporarily stores whatever is on the screen in the log window, but doesn't clear the screen. Data saved this way is not stored on disk until you save the document.

Clearing Data

You can quickly clear data from the screen or the log window.

To clear data from the screen

- Choose Clear Screen from the Session menu.

The data is erased from the screen.

To clear data from the log window

1. Choose Clear Saved Lines from the Session menu.

   You're asked to confirm that you want to erase the data.

2. Click OK.

   The data in the log window is erased.

Opening the Log Window

You can view data that has been stored in the log window.

To open the log window

- Choose Log Window from the Settings menu.

The log window opens, showing any stored data. You can select, copy, and paste text into another ClarisWorks document if you wish.

To close the log window

- Click the close box.

Copying a Table

From time to time you may receive data in tabular form and want to transfer the data into a spreadsheet document. Data on the screen is separated by spaces but contains no tabs or return characters. If you simply copy the tabular data and paste it into a spreadsheet, ClarisWorks won't be able to tell where cells begin and end. You can overcome this by using the Copy Table command.

To copy a table

1. Hold down Command as you select the data in the communications document.
2. Choose Copy Table from the Edit menu (if nothing is selected, the command is dimmed).

You can now open a ClarisWorks spreadsheet document and paste the table in the spreadsheet.

◆ **Note** The command key feature does not work in the Log Window. It only works in the terminal window.

Using a Stationery Document

When you save a document as stationery, all the settings such as telephone number, baud rate, and modem type are saved. You can simply open the document and connect immediately, without resetting anything.

For information on creating stationery, see "Saving a Document," earlier in this chapter.

To use stationery

1. Open the stationery document.

   A new, untitled communications document opens. ClarisWorks leaves the original stationery intact so that you can use it repeatedly.

2. If you want to name and save the new document, choose Save As from the File menu.
3. When the Save As dialog box (figure 2-2, shown earlier) opens, type a name for the upcoming session.
4. Click OK.

   ClarisWorks renames the document and leaves it open on the screen, ready for a new communications session.

Setting Preferences

You can set up the communications environment so that, whenever you open a session document, the session document will automatically attempt to connect to the specified telephone number. You can also specify the method of data capture.

To change preferences

1. Choose Preferences from the Edit menu.
2. You see the Preferences dialog box (figure 2-4).

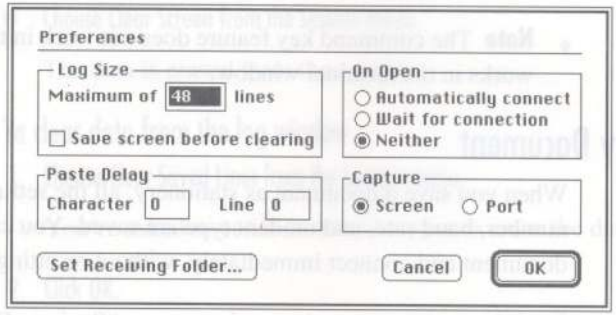


Figure 2-4
Preferences dialog box

3. To change the number of lines stored in the log window, type a new number in the Log Size box.

   The maximum number of lines is about 32,000 (or about 10K for each 70 lines). In practice, you'll usually be limited to fewer lines because of memory limitations.

4. To attempt connection when you open the document, click "Automatically connect."

   The next time you open the stationery document, it will automatically attempt a connection.

5. To wait for a connection from another computer click "Wait for connection."
6. To change the method of data capture, click Screen or Port.

   For information on these two formats, see "Capturing Data," earlier in this chapter.

More about preferences

Save Screen Before Clearing —Some information services send a full screen of information and then clear the screen before sending the next one. Select this option if you want to save each screen before it's cleared.

Paste Delay —If you find that you're sending data faster than another computer can receive it, you may need to set a delay to slow transmission. For example, if you've pasted characters that aren't showing up, you may be sending data too fast.

You can set a delay between characters or between lines. To use this option, type the delay you want (1 = 1/60 second). You may have to experiment to get the correct delay.

Set Receiving Folder —See "Switching Folders," immediately following.

Switching Folders

As you set up a session document, you may wish to create a special folder for incoming files. If you don't use a special folder, all incoming files are stored in the same folder as the application.

To save incoming files in a different folder

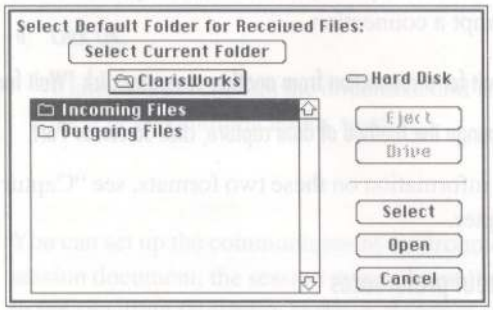
1. After creating a new session document, choose Preferences from the Edit menu.

   You see the Preferences dialog box (figure 2-4, shown earlier).

2. Click "Set receiving folder."

   You see the Select Folder dialog box (figure 2-5).

Figure 2-5
Selecting a different folder



3. Select the name of the folder you want, and click Select.

   To use the current folder, click Select Current Folder. Any incoming files for the session document are now directed to the folder you selected.

Connecting Directly to Another Computer

You can connect to another computer directly, without a modem in between. For example, if you use a portable computer, you can transfer data directly to your desk computer.

To connect directly, you'll need a null modem cable running from the serial port of one computer to the serial port of the other computer. You can use a standard ImageWriter printer cable for the connection between two current model Macintosh computers. For Macintosh 512K computers or earlier, other null modem cables will be needed (see your Macintosh owner's guide).

To connect directly to another computer

1. Open a ClarisWorks session document, and choose Connection from the Settings menu.

   You see the Connection Settings dialog box.

2. Choose Serial Tool from the Method pop-up menu.

   The dialog box changes to show Serial Tool options.

3. Verify that the connection settings on the other computer match the preset values.

   If the other computer is using a ClarisWorks communications document, that document should be switched to the Serial Tool. Both computers must be set to the same baud rate, parity, data bits, stop bits, and handshake values, as explained earlier in this chapter.

4. Choose Open Connection from the Session menu.

   When the remote computer answers, type any characters that are required, or just start typing if nothing specific is required. You can send and receive files using the steps described elsewhere in this handbook.

   If you can't see what you're typing, you may want to try setting **Local Echo** to on (Terminal Settings dialog box). If you have other problems with data on the screen, refer to "Troubleshooting," later in this chapter.

5. When you're ready to end the session, choose Close Connection from the Session menu.

Sending a File to Another Computer

You can send a file directly to another computer if both your computer and the remote computer are set up with compatible file transfer methods. When you plan to send a file, make sure that the other computer is set up to receive files automatically or that someone is available at the other end of the connection.

To send a file

1. Open a new communications document and set it up to dial.

   For information, see "Setting Up to Dial," earlier in this chapter.

2. Switch on your modem.

3. Choose Open Connection from the Session menu.

   The modem dials the telephone number.

4. When the remote computer answers, type any characters that are required.
5. Choose Send File from the Session menu.

   You see the Send File dialog box.

6. Select the name of the file you want to send, and click Send (or double-click the file name).

   A dialog box shows the status of the transfer. Click Cancel if you want to stop the procedure. A beep lets you know when the file transfer is complete.

7. Choose Close Connection from the Session menu to disconnect from the other computer.

Creating a Log-On Macro

Using the ClarisWorks macro feature, you can create a **macro** to automate the log-on process. For example, you can record all the actions you perform when you open a connection, including entering your user identification number and password. You can then use a single keyboard shortcut to perform the entire series of actions.

Creating a Macro

This section summarizes the steps for creating a macro. For complete information on creating and editing macros, see chapter 7 of the *ClarisWorks Handbook*.

To record a connection macro

1. Open a communications document, and then choose Record Macro from the Macros submenu on the File menu (or press Shift-Command-J).

   You see the Record Macros dialog box (figure 2-6).

Figure 2-6
Creating a connection macro

2. Type the name and shortcut key (or click Function Key), and then click Record.

   The Record Macros microphone appears at the top left of the menu bar. ClarisWorks will now record your actions.

3. Choose Connection from the Settings menu.

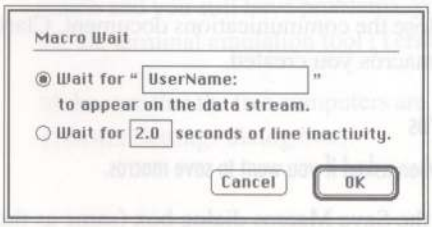
   In the Connection Settings dialog box, type a phone number, set the baud rate to match your modem, and click OK.

4. Choose Open Connection from the Session menu.

5. Choose Macro Wait from the Macros submenu of the File menu.

   You see the Macro Wait dialog box (figure 2-7).

Figure 2-7
Specifying an expression you want the macro to wait for



6. **Type the expression (string) you want to wait for, using uppercase and lowercase letters exactly as the service shows them.**

   You'll already be connected at this point, so you can copy the log-on request directly from the screen.

   In figure 2-7, the macro will wait until the expression "UserName:"—a request for user identification—appears on the screen. If you don't want to wait for a certain expression, you can specify a timed delay by typing in a number of seconds.

   You don't have to insert a macro wait. If you wish, you can simply build a macro that chooses the Open Connection command and makes the connection when you use the keyboard shortcut.

7. **Click OK to close the dialog box.**

8. **With the prompt you specified in the Macro Wait dialog box on the screen, type your user identification or other information as usual.**

   The characters you type are recorded in the macro.

9. **Continue any further actions you want the macro to perform.**

10. **When you've completed the macro, choose Stop Recording from the Macros submenu of the File menu (or press Shift-Command-J).**

    You can now connect and log on with the keyboard shortcut you assigned.

◆ **Important** A macro that contains your Password and User ID can be used by anyone. Keep your macro file confidential.

Saving Macros

When you close the communications document, ClarisWorks asks if you want to save any macros you created.

To save macros

1. **Click Yes when asked if you want to save macros.**

   You see the Save Macros dialog box (same as the Save As dialog box).

2. Type a name for the macros you created, and click Save.

For information on opening and using macro sets, see the *ClarisWorks Handbook.*

Troubleshooting

Because of the wide variety of modems, computers, and online services, it's impossible to predict every situation that might cause trouble before or during a communications session. Solutions to the most common difficulties are listed here.

You cannot connect.

Check the following factors:

- Make sure you've chosen the Open Connection command from the Session menu. The title bar of the current document shows connection status. If the status is "Waiting to Connect," the connection is still in progress.
- Make sure you have the correct cabling and that the cables are connected properly.
- Make sure that the modem is plugged in and switched on. A ready light should glow steadily when the modem is on.
- Make sure that you have the proper equipment. For connections between two Macintosh computers, you'll need a null modem cable (an ImageWriter printer cable qualifies). For connections to non-Macintosh computers, consult the manufacturer for a cable recommendation.

You're having trouble sending or receiving text or data.

Make sure that the baud rate settings match on both computers. If the settings match and you still have problems, you may need to select the On Line option for the terminal emulation tool (Terminal Settings dialog box).

Make sure that the two computers are using the same file transfer protocol (File Transfer Settings dialog box).

You see rectangular boxes or international characters scattered throughout incoming data.

The connection settings are probably incorrect. In the Connection Settings dialog box, try changing Parity to Even and Data Bits to 7, leaving Stop Bits at 1. If you still have problems, contact the system administrator at the online service.

Unexpected characters appear on the screen when you're receiving data.

Static or "noise" on the telephone line can cause unexpected characters (although some noise is normal). Try disconnecting and reconnecting from the service to see if you can get a better connection.

You lose characters during transmission, even though the settings for both computers match.

Try reducing the baud rate or changing the handshaking method (Connection Settings dialog box). Remember to have the person at the other computer adjust settings accordingly.

A bad connection could be the problem. Log off from the service and call back to try and get a better one.

No data is sent or received.

Make sure all cables are properly connected and that the telephone connection is open. The title bar should show "Connected" status. Also, make sure the On Line option for the terminal emulation tool is selected (Terminal Settings dialog box).

The letters and words you type don't appear on the screen.

Try selecting or the Local Echo option (Terminal Settings dialog box).

Nothing appears on the screen when you send data.

Make sure the connection is open. The title bar should show "Connected" status. If the connection is open, try selecting the Local Echo option (Terminal Settings dialog box).

Data appears as double characters.

The remote computer may be echoing the keys you press, generating double characters because the Local Echo option is selected. Most host computers echo keystrokes. Deselect the Local Echo option (Terminal Settings dialog box).

Incoming data writes over the last character on the first line.

Select Auto Wrap to Next Line (Terminal Settings dialog box).

Incoming data writes over the same line.

Select the New Line on a Return option (Terminal Settings dialog box).

Lines of incoming data are double spaced.

Deselect the New Line on a Return option (Terminal Settings dialog box).

You cannot see the vertical cursor on the screen.

The cursor may have been scrolled off the screen. Click the active scroll bar, or resize the window, to scroll the cursor back to the screen. Or, type a character; the cursor will return to view.

The screen shows unrecognizable characters.

The terminal type may be wrong. For example, if the host computer expects you to log on using a VT102 terminal, but you're using the TTY tool, communications won't make sense. Change the terminal (Emulation pop-up menu, Terminal Settings dialog box). After you change the terminal, disconnect and reconnect. Many host computers automatically identify the type of terminal you're using when you log on, and won't let you change terminals while online. Other systems require that you inform the host computer of your terminal type. You may need to contact the system administrator to find out which procedure is used.

A noisy telephone line can also cause unrecognizable characters. Try disconnecting and reconnecting.

Data is lost during file transfers with the Text transfer tool.

Try slowing down the rate of transmission by increasing the Delay Per Character or Delay Per Line options (File Transfer Settings dialog box). You can also try using handshaking if the host computer supports that option (Connection Settings dialog box). See "Paste Delay," earlier in this chapter.

You get a low-memory message.

If you're using a Macintosh with only 1 megabyte of memory, try freeing up some memory by making one or more of the following changes:

- Close inactive documents.
- Reduce the number of lines stored in the log window.
- Use Finder rather than MultiFinder. For information, see the *Macintosh System Software User's Guide*.
- Remove INIT files and desk accessories you don't really need from your System Folder.
- Reduce the size of the RAM cache (Control Panel). For information, see *ClarisWorks Getting Started*.

◆ **Note** When you're receiving a file, you get a message that you don't have enough room on the disk to receive the file, but you know you have room. Try switching the file transfer method from MacBinary to Straight XModem (File Transfer dialog box).

Everything was going fine, but you suddenly started having problems.

If everything is working well and you suddenly experience any of the problems listed in this section, you may want to choose Reset Terminal (Session menu). This command resets options for the terminal emulation tool to previous settings.

You want to print the contents of a communications document, but printing doesn't work.

You can't print a communications document. Select the data you want to print, copy it, paste it into a word processing document, and print from there.

Chapter 3

Changing the Settings

About Communications Tools 3-2

Changing the Connection Method 3-3

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Chapter 3

Changing the Settings

You may never need to change the communications tools that are preset for use in a ClarisWorks communications document. If for some reason you need to switch tools, this chapter tells you how.

About Communications Tools

A new ClarisWorks session document is preset to use the following communications tools, supplied and installed with ClarisWorks:

- Apple Modem Connection Tool
- VT102 Terminal Emulation Tool (compatible with VT100)
- XMODEM File Transfer Tool

These tools are part of the Macintosh Communications Toolbox, which is expandable. You can add third-party tools if you find you need them. See the instructions for your third-party software.

Depending on the type of modem and online service you choose, you may need to switch connection, terminal emulation, or file transfer tools. Refer to the manuals that came with the modem and online service registration to determine what tools you need and to get complete setup instructions. Then use the rest of this chapter as a guide to the process of switching and resetting the tools.

Changing the Connection Method

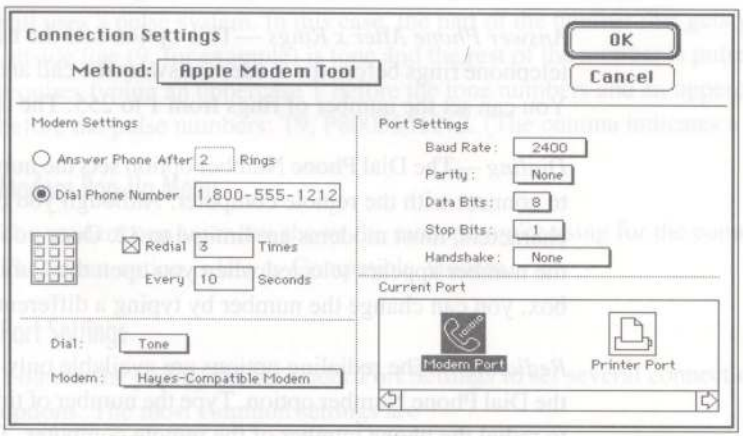
ClarisWorks is preset to use the Apple Modem Tool. (The Apple Modem Tool is compatible with most non-Apple modems.) If your online service requires a different connection tool, follow the steps in this section.

To change the connection method

1. Choose Connection from the Settings menu.

   You see the Connection Settings dialog box (figure 3-1).

Figure 3-1
Connection Settings dialog box



2. From the Method pop-up menu at the top of the dialog box, choose another tool.

   The dialog box changes to show options for the other tool.

3. Unless your online service requires changes, leave all other options as they are, and click OK.

More about connection settings

The following descriptions refer to the options in the Connection Settings dialog box, using the Apple Modem Tool.

Method

The Apple Modem Tool is designed for connecting with remote systems through a Hayes-compatible modem.

The Serial Tool is designed for *direct* connection to another computer (or another device—a modem, for example) through the serial port on the Macintosh. To type commands directly to a modem, you would choose the Serial Tool.

Modem Settings

The modem settings give instructions to the modem on making and receiving calls.

Answer Phone After x Rings —This option sets the number of times your telephone rings before the modem answers the call and establishes connection. You can set the number of rings from 1 to 255. The preset option is two rings.

Dialing —The Dial Phone Number option sets the number the modem will dial to connect with the remote computer. Although you can type up to 200 characters, most modems are limited to 32. Once you have entered a number, the number appears selected when you open the Connection Settings dialog box, you can change the number by typing a different one.

Redialing —The redialing options are available only when you have selected the Dial Phone Number option. Type the number of times you want the modem to redial the phone number of the remote computer. Then enter the number of seconds between redials. The preset option is three attempts, redialed at 10-second intervals. If you deselect the option by removing the X from the Redial check box, the modem doesn't redial.

Dial Pop-Up Menu

This menu gives you a choice of dialing method.

Tone and Pulse —Tone is the dialing method used with most push-button telephones. The Pulse method is used with many rotary-dial telephones. Mixed is a combination of both methods. As you change methods, the icon that represents the method changes. The preset option is Tone, the most common transmission signal in use today.

Mixed Dialing —Mixed dialing is used when part of the telephone number is in pulse and part is in tone.

One situation that requires mixed dialing is calling an electronic banking service from a rotary telephone. Although you can probably reach the service by pulse dialing, you must then enter an extension in tone numbers. This requires typing an uppercase P before you enter the pulse number for the service and an uppercase T before the tone extension: P8005551212, T1678. (The comma indicates a pause.)

Mixed dialing is also used where a building has a tone system but the region still uses a pulse system. In this case, the part of the number that gets you an outside line (9, for example) is tone and the rest of the number is pulse. This requires typing an uppercase T before the tone numbers and an uppercase P before the pulse numbers: T9, P8005551212. (The comma indicates a pause.)

Modem Pop-Up Menu

The modem pop-up menu shows the modem you're using for the connection. The preset option is Hayes-Compatible Modem.

Port Settings

You use the pop-up menus under Port Settings to set several connection options. The most common settings are

- Parity None, Data Bits 8, Stop Bits 1
- Parity Even, Data Bits 7, Stop Bits 1

If you use settings other than these, you should probably consult the system administrator.

- **Note to Power Users** To customize command strings for your modem, hold down the Option key and select Custom in the pop-up menu.

Baud Rate —The Baud Rate option regulates the speed at which data is transmitted between your Macintosh and the modem. The baud rate is usually the number of bits sent per second. Both your Macintosh and the remote computer must transmit data at the same baud rate, unless you are using a modem that adjusts the sending baud rate to match the requirements of the remote modem.

You can set the baud rate from 300 to 57,600 (56K) baud. A 110-baud option appears, but may not work. The preset option is 2400.

◆ **Tip** If incoming data is garbled (or missing), the baud rate setting may not match that of the other computer. Or, the telephone lines may be noisy.

Parity —Parity refers to a method of checking to see that data isn't garbled during transmission. You can choose any of the three parity settings, as long as the other computer is also set up to use the same parity. The preset option is None.

If you're connecting to an information service or remote computer, check the service's setup instructions to determine what parity to use. Call the system administrator if you aren't sure.

Some older computer systems require mark or space parity (different data-checking methods). ClarisWorks doesn't support these settings. If the service you're trying to reach specifies mark or space parity, ask the system administrator whether you can substitute a different parity setting.

Data Bits —Use the Data Bits pop-up menu to set the number of bits that make up a character. With ClarisWorks, your Macintosh can send and receive 5-, 6-, 7-, or 8-bit characters, whichever the other computer requires. The preset option is 8-bit characters.

Stop Bits —Stop bits are used to mark the end of a transmitted character. ClarisWorks supports 1, 1.5, or 2 stop bits. Typically, a stop bit is 1 bit long. The preset option is 1.

Handshake —Handshake refers to a method of regulating the flow of data between your Macintosh and the remote computer. Both computers must use the same handshake method or the process will not work. The preset option is None.

If the remote computer sends information faster than your Macintosh can receive it, you may lose some incoming characters. In these situations, you can try switching to XON/XOFF handshaking (or a slower baud rate). Using XON/XOFF prevents the loss of data when either computer sends characters faster than the other computer can receive them.

Contact your modem manufacturer if you want to set up hardware handshaking. Also, see "Note to Power Users," under "Modem Pop-Up Menu," earlier in this chapter.

Current Port Settings

When you select one of the port icons, you're specifying the port, on the back of the Macintosh, that is connected to the modem. You can use either the Modem or Printer port. If you're using AppleTalk, however, the Printer port is unavailable because AppleTalk uses it. Icons for additional serial ports appear in the Current Port window if other ports are available.

- **Note** The printer port is used for connection through Appletalk to a network modem. See your modem manual for instructions.

- **Note on Serial Cards** If you install a serial card on your Macintosh, ask for the software that registers the card with the Apple Communications Toolbox. The software is not included in all packages.

Changing the Terminal

ClarisWorks is preset for VT102 terminal emulation, which is compatible with VT100 terminals. If your online service requires TTY emulation, follow these steps.

To change terminals

1. **Choose Terminal from the Settings menu.**

   You see the Terminal Settings dialog box (figure 3-2).

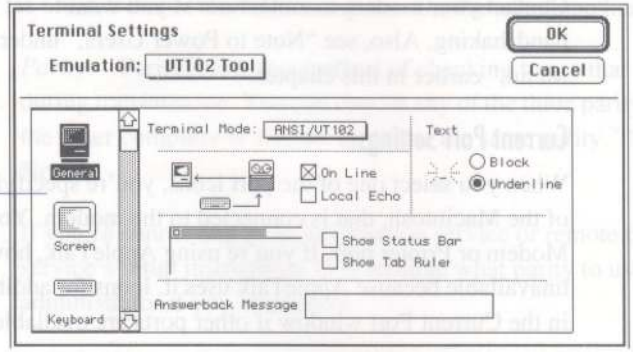


Figure 3-2
Terminal Settings dialog box

2. **From the Emulation pop-up menu at the top of the dialog box, choose TTY Tool.**

   ClarisWorks automatically changes the dialog box and resets options for the TTY terminal.

3. **Unless your online service requires changes, leave all other options as they are, and click OK.**

More about terminal settings

The following descriptions refer to the options in the Terminal Settings dialog box, using VT102 emulation.

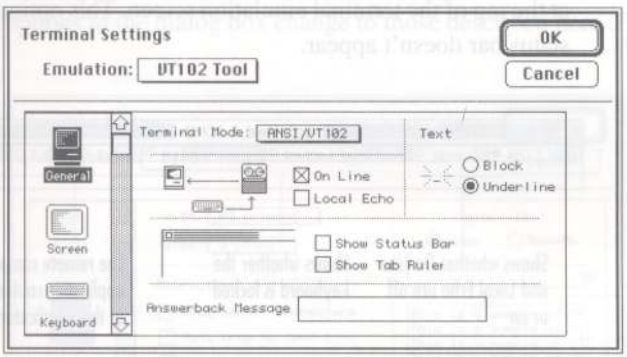
General Setup Options

In the Terminal Settings dialog box, you see a list of setup icons on the left (shown in figure 3-2). The options on the right vary depending on which of the four setup icons you select.

- **Important** During a session, you may notice that some settings change, based on communications from the host computer. This happens because the VT102 responds to special character sequences sent by the host computer. If you have problems, you can restore the last saved settings by choosing Reset Terminal from the Session menu.

The General icon is selected when you open the Terminal Settings dialog box (figure 3-3).

Figure 3-3
General setup options



Terminal Mode —You use this pop-up menu to specify a VT102 mode for your Macintosh. ANSI/VT102 is preset. Choose VT52 to emulate a Digital Equipment CorporationVT52 terminal. When you choose VT52, the Character Set Settings dialog box is disabled because VT52 terminals don't support character set options.

On Line and Local Echo —When the On Line option is selected, your Macintosh is **online**, which means it can communicate with another computer. The characters you type are sent to the remote computer, and incoming data is shown on the Macintosh screen.

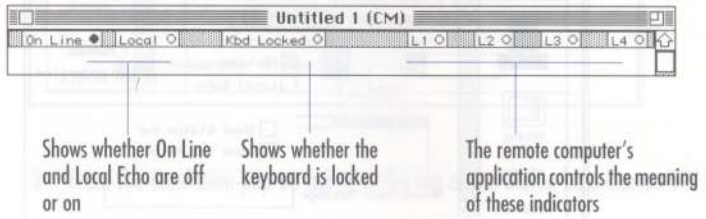
When you deselect On Line, your Macintosh stops sending data to the remote computer and ignores incoming data without terminating the connection.

The Local Echo option is available only when On Line is selected. Local Echo determines whether characters you type on the keyboard or numeric keypad go to your Macintosh screen as well as to the remote computer. Most host systems echo keystrokes (show the characters you type on your screen), so Local Echo is preset unselected.

If you can't see the characters you type, you may need to select Local Echo to send the characters you type to the Macintosh screen as well as to the remote computer. If you see double characters, deselect Local Echo.

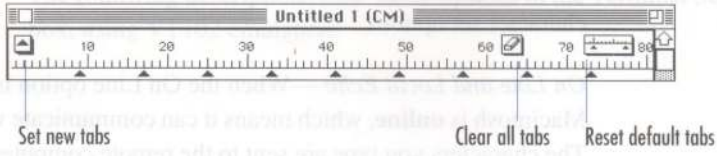
Show Status Bar—The settings for the Show Status Bar (figure 3-4) determine whether a status bar (similar to the status lights on a VT102 terminal) appears at the top of the terminal emulation screen. This option is preset off, so that the status bar doesn't appear.

Figure 3-4
Status bar



Show Tab Ruler—This option determines whether a tab ruler appears at the top of the terminal screen (figure 3-5). If you show the tab ruler, you can set or clear tabs using the icons on the ruler. Tabs are preset every 8 spaces.

Figure 3-5
Tab ruler



Answerback Message —In the Answerback Message box, you can type a character string that is returned to the remote computer when an enquire character is detected in the incoming data stream. The answerback response provides an identification response to the remote computer. You don't need to provide an answerback string unless the remote computer requires it.

You can send the answerback message manually by pressing Control-Enter (ADB keyboard) or Command-Enter (Macintosh Plus keyboard). To ask for an answerback message from the remote computer, you do the same thing.

Text Cursor —This option determines whether the cursor appears as a solid block or as an underline. The option is preset for underline.

Screen Setup Options

When you select the Screen icon in the VT102 Terminal Settings dialog box, options in the dialog box change to those described here (figure 3-6).

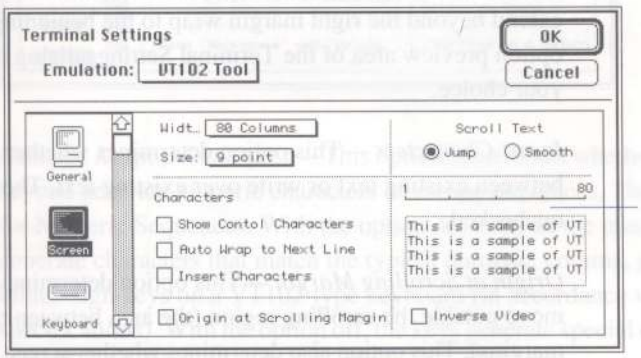


Figure 3-6
Screen setup options

Option Preview Area —When you change screen settings, the Option preview area shows the effects of your changes.

Width Pop-up Menu —The Width pop-up menu determines the number of display columns used. You can choose 80 columns per line or 132 columns per line. The preset option is 80 columns per line.

Standard terminal width is 132 characters. If you use that width on a 9-inch or 13-inch screen, you have to scroll to see either side. On a two-page monitor, you can see the full line width.

- **Important** ClarisWorks clears the screen when you change certain settings that affect the display. Before changing the width, select the Save Screen Before Clearing option (Saved Lines command, Settings menu) and be sure Save Lines Off Top (Session menu) is checked.

Size Pop-up Menu —The Size pop-up menu determines the font size of the characters displayed on the screen. You can choose 9 point or 12 point. The option preview area of the Terminal Settings dialog box reflects your choice.

Show Control Characters —You will probably never need to change the Show Control Characters option. When selected, this option shows control characters in a readable form.

Auto Wrap to Next Line —This option determines whether characters that extend beyond the right margin wrap to the beginning of the next line. The option preview area of the Terminal Settings dialog box (figure 3-6) reflects your choice.

Insert Characters —This option determines whether characters are inserted between existing text or write over existing text. The option is preset unchecked.

Origin at Scrolling Margin —This option determines whether the cursor can move outside the scrolling region (the area between the top and bottom margins). This option also determines whether screen addressing is in absolute or relative coordinates. Usually, the remote computer determines the appropriate setting. The option is preset unchecked.

Scroll Text —This option determines how data scrolls as you receive it. Smooth scrolling usually slows down the rate at which incoming data is displayed but makes the data easier to read. The preset option is Jump.

- **Note** If you switch to Smooth, you should probably also select the XON/XOFF handshaking option (or another handshaking option) to control the flow of data and reduce the chance of losing data.

Inverse Video —This option determines whether the Macintosh displays white text on a black background or black text on a white background. When you select or deselect Inverse Video, the option preview area shows the effect. This option is preset unchecked (text is black on a white background).

Keyboard Setup Options

When you select the Keyboard icon in the Terminal Settings dialog box, options in the dialog box change to those shown in figure 3-7.

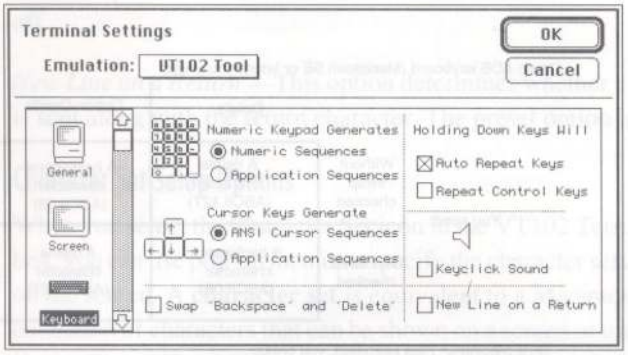


Figure 3-7
Keyboard setup options

Numeric Keypad Generates —This option determines whether the keys on the keypad generate numeric characters or escape sequences. The option is preset for Numeric Sequences. With the option on, keys on the numeric keypad generate characters that match the typical numeric, comma, period, and minus-sign keys on a VT102-type keyboard (in accordance with ANSI specifications). With the option off, the keys generate special escape sequences (specified by Digital Equipment Corporation).

Cursor Keys Generate —This option determines the characters transmitted when you press the arrow (cursor) keys. The preset option is ANSI Cursor Sequences. When you select Application Sequences, the Macintosh sends cursor-control functions (specified by Digital) to the remote computer.

The remote computer usually sets the cursor keys option as appropriate. If you see unexpected characters when you press the arrow keys, you may need to change the setting. Consult the system administrator at the remote computer for assistance.

Swap 'Backspace' and 'Delete' —You use the swap option to specify which character ClarisWorks sends when you press Delete (on ADB keyboards) or Backspace (on Macintosh Plus keyboards). The swap option is preset off.

Figure 3-8 shows how the swap options work.

Figure 3-8
What happens when you swap Backspace and Delete

On an ADB keyboard (Macintosh SE or later), you press:

You send:	Delete	Option-Delete
Without swap checked	A delete character (ASCII 127)	A backspace character (ASCII 08)
With swap checked	A backspace character (ASCII 08)	A delete character (ASCII 127)

On a Macintosh Plus keyboard, you press:

You send:	Backspace	Option-Backspace
Without swap checked	A backspace character (ASCII 08)	A delete character (ASCII 127)
With swap checked	A delete character (ASCII 127)	A backspace character (ASCII 08)

A delete character actually backs up over the letters. A backspace character simply tells the host to ignore the letters, even though they are still on the screen.

Auto Repeat Keys —This option determines whether non-control keys repeat when you hold them down. The Tab, Return, Backspace, Enter, and Escape keys repeat without changing a setting. The preset option is on.

Repeat Control Keys —This option determines whether keys used to generate control characters repeat when held down. You generate control characters by simultaneously pressing the Control key and another key on an Apple Desktop Bus keyboard. On a Macintosh Plus keyboard, you can generate control characters by pressing the Command key as you press another key. The preset option is off.

Keyclick Sound —This option determines whether an audible clicking sound is made when you press a key. You can change the volume level from the General or Sound panels within the Control Panel of the Macintosh. The option is preset off.

New Line on a Return —This option determines whether a line-feed character is sent along with the return character. The preset option is off.

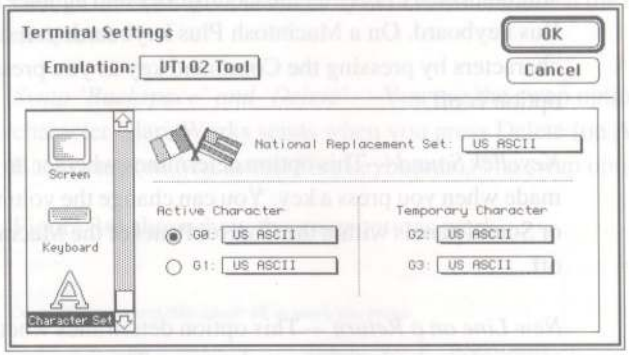
Character Set Setup Options

When you select the Character Set icon in the VT102 Terminal Settings dialog box, you can use pop-up menus to specify the character sets you want to display on the screen. A **character set** is equivalent to a Macintosh font. It's a collection of characters that can be shown on a screen or used to code computer instructions. US ASCII and UK ASCII are examples of character sets.

◆ **Note** VT102 terminals using the US ASCII character set can't generate some of the characters available on the Macintosh. Specifically, the VT102 Tool understands only 7-bit characters, and the Macintosh can generate 8-bit characters. If you try to enter an 8-bit character, the Macintosh beeps to let you know you can't enter the character.

Character set options are shown in figure 3-9.

Figure 3-9
Character set options



National Replacement —This pop-up menu gives a choice of numerous character sets. The preset choice is US ASCII.

UK ASCII is the same as US ASCII, except that the pound sterling symbol (£) replaces the number sign (#). The other character sets use various accented characters.

When you choose any set other than US ASCII, the International option becomes available in the other menus (G0 through G3). For example, when you select French as the national replacement set, French also appears when you open any of the other menus.

Active Character Sets —You use these pop-up menus (G0 and G1) to specify the active character set and an alternate. Both menus contain the same list of character sets, and US ASCII is the preset option for both menus.

Temporary Character Sets —The G2 and G3 menus specify the two temporary character sets. Both menus contain the same list of character sets, and US ASCII is preset for both menus. Characters are swapped, one character at a time. Either G2 or G3 temporarily becomes the active character set, one character is generated, and then the VT102 Tools switches back to either G0 or G1, depending on which menu controlled the last active character set.

Resetting the VT102 Tool

Occasionally, in a difficult communication session, you may need to reset the VT102 Tool. To do so, choose Reset Terminal from the Session menu. Resetting the terminal returns all options in the Terminal Settings dialog box to the last saved settings. Also, the Macintosh clears all the data from the session document. If Save Lines Off Top is on, the cleared data is saved in the log window.

VT102 Key Emulation

Some keys on VT102 keyboards don't exist on Macintosh keyboards. The VT102 Keys menu gives you the ability to emulate these keys.

Keypad Submenu —This submenu is an on-screen equivalent of the numeric keypad, with VT102 keys substituted at the top. Choosing a key is the equivalent of pressing the key on a VT102 terminal.

Cursor Submenu —This submenu is an on-screen equivalent of the arrow keys.

No Scroll —This command is available only when the connection tool is set up for XON/XOFF handshaking. With No Scroll on (checked), you can freeze the screen while data is coming in. You can then read the screen contents before the data scrolls off. To accomplish the same thing from the keyboard, press Control-S to stop scrolling and Control-Q to continue scrolling.

Keyboard Mapping

Some keys on the VT102 terminal have no equivalents on Macintosh keyboards. The following table shows how to generate the missing VT102 keys. Keys shown under the ADB Keys heading apply to all ADB keyboards (Apple, Apple Extended, Apple Extended II, and Macintosh Portable with keypad).

Table 3-1
Keyboard Equivalents

VT102 Keys	Macintosh Plus Keys	ADB Keys
Arrow (cursor)	Arrow keys or Keys menu	Arrow keys or Keys menu
Backspace	Backspace	Delete
Delete	Option-Backspace	Option-Delete
Short break (Break)	Option-Enter	Option-Enter
Long break (Shift-Break)	Shift-Enter or Session menu	Shift-Enter or Session menu
Answerback (Control-Break)	Command-Enter	Control-Enter
Control	N/A	Control
Escape	Tilde	Escape
Left single quotation mark	N/A	Tilde
Grave accent (`)	N/A	Tilde
Tilde (~)	N/A	Shift-tilde
Keypad	Keypad or Keys menu	Keypad or Keys menu
Line Feed	N/A	Control-J
No Scroll or Scroll	Keys menu	Control-Q (on)/Control-S (off)
PF1, PF2, PF3, PF4	Keypad or Keys menu	Keypad or Keys menu
Set Up	Settings menu	Settings menu

Changing the File Transfer Method

ClarisWorks is preset for XMODEM file transfer. The XMODEM tool provides a method of transferring data that includes error checking and correction. The other option for file transfer is the Text tool, which is designed for sending text-only files, without any information about format or font, from one computer to another. If you need to change the file transfer tool, follow these steps.

To change file transfer methods

1. Choose File Transfer from the Settings menu.

   You see the File Transfer Settings dialog box (figure 3-10).

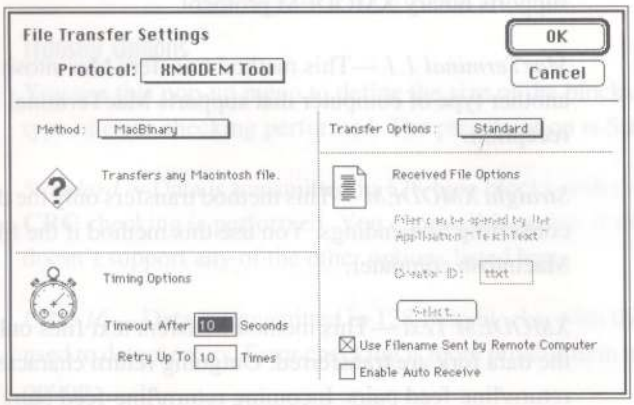


Figure 3-10
File Transfer Settings dialog box

2. From the Protocol pop-up menu at the top of the dialog box, choose Text Tool.

   ClarisWorks automatically changes the dialog box and resets options for the Text tool.

3. Unless your online service requires changes, leave all other options as they are, and click OK.

More about file transfer settings

The following descriptions refer to the options in the File Transfer Settings dialog box, using the XMODEM tool. If you change file transfer tools, ClarisWorks automatically resets the options for the most commonly expected conditions.

Method

You use the Method pop-up menu to choose the variation of XMODEM transfer you need. Options in the dialog box change as you choose a variation and are preset for the most common requirements.

MacBinary —This method transfers any Macintosh file (a document, application, or system file) to or from a Macintosh or any computer that supports binary XMODEM protocol.

MacTerminal 1.1 —This method transfers Macintosh files to a Macintosh or another type of computer that supports MacTerminal 1.1, with automatic file reception.

Straight XMODEM —This method transfers only the data fork of files, without converting line endings. You use this method if the file is destined for a non-Macintosh computer.

XMODEM Text —This method transfers text files only. Only the contents of the data fork are transferred. Outgoing return characters are converted to return/line-feed pairs. Incoming return/line-feed pairs are converted to return characters. You use this method when the remote system ends lines with return/line-feed characters.

Timing Options

The timing options regulate retransmission attempts.

Timeout After... Seconds —This option determines the length of time (in seconds) that the receiving computer will wait between blocks of data for an appropriate response from the other computer. You enter a whole number 1 to 32767. The preset option is 10 seconds. You may need to increase the value when you connect to an information service that is slow to respond.

Retry Up To... Times —This option determines the number of times the sending computer attempts to retransmit a block of data that the receiving computer has either received with errors or not acknowledged. You enter a whole number 1 to 32767. The preset option is 10 times. For large files, you may need to increase the number.

Transfer Options

You use this pop-up menu to define the size of the blocks transmitted and the type of error checking performed. The preset option is Standard.

Standard —Data is transmitted in 128-byte blocks with simple checksums; no **CRC** checking is performed. You choose this option if the remote system doesn't support any of the other options listed here.

CRC-16 —Data is transmitted in 128-byte blocks, with the CRC-16 algorithm used to detect errors. Error checking is more reliable than it is with the Standard option.

1K Blocks —Data is transmitted in 1K blocks (1 block = 1,024 bytes). This option transfers data faster than the Standard and CRC-16 options. The CRC-16 algorithm is used for error checking.

CleanLink —Data is transmitted in 1K blocks, with the CRC-16 algorithm used for error checking. No acknowledgment is required between sender and receiver. Data transfer is faster with this technique because the sender doesn't wait for a block to be acknowledged before sending the next block. If the receiving computer detects an error, however, it cancels the transmission. Avoid choosing this option if your connection tool is prone to transmission errors, since any error that occurs while the file is being transmitted cancels the entire file transfer.

Received File Options —These options determine certain attributes of received files.

Creator ID —This option is selected for Straight XMODEM or XMODEM Text tools. You specify the application that should be launched when a text file sent by either of these tools is opened from the Finder.

Use Filename Sent by Remote Computer —This option determines whether the XMODEM tool automatically saves the received file with the original file name used on the sending computer. The option is available only with MacBinary and MacTerminal 1.1 methods.

The option is preset selected. When file transmission is complete, the XMODEM tool automatically saves the file with its original name. When the option is deselected, you're asked to name the file and save it after file transmission is complete.

Glossary

auto wrap: A setting that determines whether characters that extend beyond the right margin wrap to the beginning of the next line.

baud rate: The speed at which data is transmitted and received through your modem.

binary format: A format for transferring files from one computer to another that makes an exact copy of the file, including tab and return characters.

bulletin board: A computer system set up for the exchange of information and files.

capturing data: See **data capture**.

character set: A collection of characters, similar to a Macintosh font, that can be used on the screen during a communications session or to code computer instructions.

column display: A setting that determines the number of columns in which incoming data is displayed.

connect time: The time that passes while you're connected to an online service or bulletin board (usually the amount for which you're billed).

connection tool: The software that manages the port connection.

CRC: Cyclical redundancy checking, a method of verifying data.

data bits: A setting for the number of bits used to make up a character.

data capture: A method of saving data on a disk as you receive it.

file transfer tool: The software that controls the method in which data is transferred from one computer to another.

handshake: A method of regulating the flow of data between your Macintosh and a remote computer; both computers must use the same handshake method.

host computer: A remote computer you connect to for information or for participation on a bulletin board.

information service: A computer system you connect to, usually for a fee, that provides various collections of information to numerous users.

lines off top: Incoming data that scrolls off the computer screen and into the log window.

local echo: A setting that determines whether characters you type on the keyboard or numeric keypad go to your Macintosh screen as well as to the remote computer.

log window: The portion of a communications document where incoming data is temporarily stored.

logging off: The process of disconnecting from an information service.

logging on: The process of identifying yourself to an information service. Also, the process of connecting.

macro: A recorded series of actions and commands you can execute by using a single keyboard shortcut or function key.

mixed dialing: A combination of tone and pulse dialing methods.

modem: A device that turns data from your computer into information that can be transmitted over telephone lines or intercomputer networks.

online: In communications, the state of being in communication with another computer.

parity: A method of checking to see that data isn't garbled during transmission.

password: A private word you must enter to be allowed access to an information service or bulletin board.

public network: An access point for multiple users to various communications services.

pulse: The dialing method used with many rotary-dial telephones.

quit commands: Commands you give a communications service to disconnect. Common examples are *off, bye, quit, exit, logoff,* and *logout.*

remote computer: Another computer, in another location, with which you communicate by way of a modem.

session: A complete cycle of communications—connecting, doing work, and disconnecting.

session document: A ClarisWorks communications document.

stationery: A document in which you save communications settings for repeated use.

stop bits: A setting used to mark the end of a transmitted character.

terminal: A system of hardware and software you use to send and receive information.

terminal emulation: The process of setting up a computer to imitate the settings on another computer.

terminal emulation tool: The software that determines the type of terminal your computer imitates (determined by the type of terminal to which you're connecting).

text format: A format for capturing and saving data that doesn't recognize and doesn't save tab and return characters in incoming data.

tone: The dialing method used with most push-button telephones.

transmission channel: The means of communicating from one computer to another. The transmission channel can be a telephone line or an intercomputer network.

user name, user ID: Names and numbers that identify you to information services or bulletin boards.

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